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The Principles of War: A Criticism of Colonel J.F.C. Fuller's Book "The Foundations of the Science of War"

November 4, 2022 - Captain E.L.M. Burns, M.C., R.C.E.

Reading Time: 25 min

A Classic Book Review from the *Canadian Defence Quarterly*

*The following review was written by Captain Edson L.M. Burns for the old Canadian Defence Quarterly in **1927**. In it he assesses one of the British Army's most fertile minds, that of J.F.C. Fuller, whose call for critical thinking still adorns the classrooms of the Canadian Army Command and Staff College. Pay attention to Burns' categorization of some theories as 'indigestible chop suey' and consider his criticisms in the context of how the principles of war are currently perceived and employed by the Canadian Army.*

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Colonel Fuller's latest book was saluted, on its appearance, with probably the most damnatory review that the Army Quarterly has ever printed. Everyone knows that Colonel Fuller has waged an inky warfare, since 1918, with the "bow and arrow generals"; apparently one of these much harassed

gentlemen had been roused to retaliation. The old war horse made a good job of it; he concentrated his attack where his enemy was weakest (in this case on the theory of the "Threefold Order") and wrought great havoc; in fact it is not too much to say that he pulverized it with ridicule. However, the threefold order is only a part of Colonel Fuller's system, and it seems to me that, while the author claims high importance for it, announcing it as the axe-plan of his chariot of inspiration, it is actually only a method of arranging the result of his thought, and the essential and useful parts of his theory are independent of it.



► Caption

The book opens with a surprise. In the preface Colonel Fuller confesses that he is the man who first among British soldiers discovered and expounded the eight principles of war, which are now embalmed in F.S.R. [Field Service Regulations] Vol. 2, Chapter 1, Section 2. Most soldiers who have read this paragraph, if they were curious about authority behind the words, probably envisaged a committee of military high priests, accredited by the War Office, receiving the awesome Eight, properly engraved on tables of stone, handed down by Omniscient Intelligence – in short, they imagined that there was something transcendental and sacred about the Eight Principles, and that argument in respect of them would be irreverent. However, we now learn that their origin was a comparatively simple one; that Colonel Fuller's curiosity and industry brought them into being.

When he was a Staff College aspirant, he was irritated by the paragraph in the old F.S.R. which loftily observes "The fundamental principles of war are neither very numerous nor in themselves very abstruse, but the application of them is difficult, and cannot be made subject to rules." What were these

principles of war? he asked himself. No one could tell him, so he read Clausewitz, Jomini and Foch and the correspondence of Napoleon and eventually excavated several authentic ones, as it appeared to him. He thought constantly on the subject, and wrote and lectured on it intermittently from 1915 to 1919, when his theories were seized on by the committee which was rewriting F.S.R., and incorporated in the book.

The “official” principles of war are easy to comprehend, and in themselves seem obviously true. The only one which is not clear, to my mind, is the Principle of “Economy of Force”, of which more later. However, Colonel Fuller had not finished with them. They appeared to him to be too haphazard, insufficiently organized – in short, unscientific. Colonel Fuller believes that War may be a science, and should be a science. The present book, as its name implies, is an attempt to formulate the basis of the hoped for a science.

War a Science

Reams have been written about whether war can ever be a science or whether it is better to consider it as an art, or merely as a vulgar brawl where the object is to get the thumb in the opponent’s eye as quickly as possible. Colonel Fuller argues eloquently that it should be a science, and no doubt it would be easier for teachers and students of war if the practice of war could be systematized as the “sciences” of salesmanship, advertising or sanitary engineering now are. Indeed, there appears to be no reason why, if there is a science called Political Economy, which deals with the organization and operation of the world in which men gain their living, there should not be one of War, which exhibits phenomena not so complex. But whether there can be, or should be a Science of War, in fact, there is none now, as the author points out in his chapter on “The Alchemy of War”. This chapter is excellent; as a destructive critic he is always sound and amusing. By the term “destructive critic” nothing derogatory is meant. To my mind, a

man may do nearly as useful work in destroying the false, exposing shams and arousing men to deficiencies as in exhibiting truths. It is a question in which direction the individual's talents lie.

When Colonel Fuller has finished this chapter and the next, on the Method of Science, the reader will be as keen on War as a Science as Rotarians are on Service. Alas, when in the succeeding chapters he will find it difficult to maintain enthusiasm, and if I am not mistaken, will in the end close the book sadly with the conviction that if the Fullerian system be the science of war, then that science is as the peace of God, which passeth all understanding.

Detailed Criticism of Colonel Fuller's System

Colonel Fuller states that what is chiefly needed in the British army is a spirit of full and free criticism, and hopes that this book will be well flailed by critics, in order that the good grain in it may be preserved and the chaff blown away by the wind. It is in a spirit of amiable compliance with this wish that the present article has been written.

The Threefold Order

I do not feel competent to explain what precisely Colonel Fuller means by the Threefold Order, but I can at least quote him. On page 51 of the book we find: "This threefold order surrounds us at every turn. Not only do we live in a three dimensional world, but we think three - dimensionally and our thoughts reflect a threefold order. We sense ourselves as mind, body and soul, and the world as a force moving through space. We talk of God, Nature and Man; and all of our religious ideas are based on a Trinity, as are those of all but the crudest of cults. We see Nature as earth, water and air and mankind as men, women and children. We are surrounded by solids, liquids and gasses and by birth, life and death. We live in a perpetual twilight, that infusion of light and darkness, which in themselves are, to our minds, zero - that is, they are incomprehensible. The threefold order I believe to be the key to the understanding of all things; it is my postulate."

Colonel Fuller endeavours to preserve this grouping by threes all through his book, and in the end gives us nine principles of war, organized in three groups of three. If the principles in the end are valid and useful, there would be little reason for quarrelling with the precise fashion in which they are set down, but it appears to me that Colonel Fuller has permitted his passion for symmetrical trinities to interfere with logical arrangement and clear thought on the subject he really knows something about – war. His metaphysics, psychology, philosophy, physics and algebra – all the sciences he calls on to aid him in the development of his system are more than a little shaky, yet he seems to want us to accept the indigestible chop suey which he has confected from these ingredients as sound pabulum, which will nourish our intelligence, and permit us to evolve truths – accurate laws of a science of war.

What, for instance, could be more unscientific than the consideration of man as Mind, Body and Soul, with corresponding activities as mental, moral and physical? Surely if the soul resided anywhere in a man, it is in his mind? Colonel Fuller says it is “somewhere within him”. In a scientific work, he should be more specific. If not in the brain, is it in his heart, pancreas, adrenals, or as in the Anglo-Indian Colonels of *Punch*, in the liver? The fact is, that men of science do not speak of the soul, but divide phenomena into mental and physical. In the consideration of war as it affects man, it should be enough to think of factors which affect the mind, and those which affect the body; the body’s effect on the mind, and the mind’s effect on the body.

It is also stated that there is a Threefold Order of Force – Mass, Motion, Energy. Everyone who has studied elementary mechanics knows that Energy is defined as a body’s power of doing work by virtue of its motion. Energy is equal to $\frac{1}{2} M V^2$. Thus we have only two bases of force – mass and motion.

This I hope, is enough argument about the Threefold Order. In this world things do not necessarily go by threes, but in vastly more complicate patterns, whose symmetry often escapes the human mind. In my opinion,

the book would be far better without the Threefold Order; it introduces a needless complication and the method of its exposition merely irritates the intelligent reader, whether he is well acquainted with science or not.

The Body of Man as a Model for Organization

Another example of the scientific method as applied to war by Colonel Fuller:

“... Man’s world and work are always tending to approximate in organization to his own body, which is the most wonderful and perfect machine devised Whatever we are asked to organize, we should think in terms of the human body, for as the world is a reflection of Something in the mind, so should all human organizations reflect the threefold order in man.”

That man’s body is the most wonderful and perfect machine devised is news indeed. A moment’s thought will show anyone that man’s body is far from perfect, judged by any standards. The lower animals can give him points in every department except brain, hand and vocal development. He cannot leap like the grasshopper, see like the eagle, smell like the hound, digest like the ostrich – and so on through a considerable list. To remedy these imperfections of his body he resorts to tools and devices. Every invention is to aid the imperfect faculties and powers of man. Tell a man suffering from toothache, dyspepsia or hay fever that the human body is a perfect machine! And if we believe in evolution, man’s body must be in the process of evolution the same as everything else, and so cannot be in its final form – unless we assume that it has reached the ultimate pinnacle now, and that devolution is setting in.

Colonel Fuller’s Method Scientific?

The purpose of the above arguments, in case the reader is growing restive under the bombardment of nonsense, is to confute Colonel Fuller’s claim that he has evolved his principles of war scientifically. When an author who

professes scientific accuracy, is guilty of such loose thinking as is exemplified in the quotation above, his every statement and syllogism becomes suspect. Finally, Colonel Fuller does seem to have heard that Herbert Spencer, whom he quotes as his teacher in philosophy, in his later years gave a warning against drawing too strict analogies between the evolution of societies and of organisms, thus modifying his original position that the laws of evolution were uniform throughout the universe, if discoverable. Applied to the present subject, this means that you cannot tell how an army should be organized by studying how a tiger, crocodile, man, or other best of prey is organized.

[PME Note: Herbert Spencer argued that the 'law' by which the human species was preserved was such that those best adapted to the conditions of their existence "shall prosper most ... survival of the fittest." Justice: Being Part IV of the Principles of Ethics, 1891, p. 17]

Value of the Book under Review

When the author abandons the realms of metaphysics and celestial mechanics and proceeds to the examination of the concrete phenomena of war, his conclusions and comments are always of value. When he discusses a battalion of tanks, a propagandist, gas, of the direction of war by committees of parliament, one feels that one is listening to the opinions of a soldier rarely gifted with understanding and imagination. His output of ideas seems to be unlimited. Some may be too radical, some may be fundamentally wrong, but all are suggestive, and with his central idea, which is "Think ahead: of the next war rather than the last one, or the last dozen", surely no one can disagree.

It is difficult, at times, in the present book to separate the useful from the useless, but anyone interested in the higher theory of war who will take the pains to read it will be rewarded with a great deal of most invigorating and stimulating stuff. It operates on the mind like Kruschen salts are advertised as doing – that is, one feels like running, leaping and shouting, down the

pathways of military knowledge, and springing confidently to surmount the obstacles of military problems. In doing so, one may [be]come a cropper, but it is something to try hard.

Colonel Fuller's Revised Principles of War

Colonel Fuller takes the original principle of Economy of Force, and promotes it to the status of Law – the fundamental law which all military operations must obey, and which his principles are particular expressions of. The law is, that the object is to be attained with the minimum expenditure of force. This is always the problem in war.

If we consider the definition of the word “economy” we arrive at the same result. Economy of Force – the use of force to the best advantage. Economy does not mean parsimony – niggardliness.

The definition of the principle of Economy of Force in F.S.R. will lead us to the same conclusion. It says – “To economize strength, while compelling a dissipation of that of the enemy must be the constant aim of every commander.” Yes, indeed! If he can do that, he will be successful: he will be a master of the art of war. But the “principle” in itself is no guide for action, it is merely the enunciation of the commander’s problem.

For all these reasons, it appears to me that Colonel Fuller is right when he calls “Economy of Force” not a principle, but a fundamental law. The principles which are derived from the law of Economy of force are:

1. The Principle of Direction.
2. The Principle of Concentration.
3. The Principle of Distribution.
4. The Principle of Determination.
5. The Principle of Surprise.
6. The Principle of Endurance.
7. The Principle of Mobility.
8. The Principle of Offensive Action.
9. The Principle of Security.

It is not at all easy to express in a few words the meaning of these nine principles, for the author takes several pages over each of them himself. It is also possible that I do not fully understand what he has been driving at, every time, because much of the explanation is highly mystical and obscure as a result of the pseudo-scientific method of the book. However, here follow approximate explanations, at any rate.

The Principle of Direction

A General, in forming his plan, must select a line of operation which will secure his communications, will leave him freedom of action strategically, and will finally enable him to bring the enemy to battle under tactical conditions favourable to himself.

The Principle of Concentration

When the General discovers where the enemy is, and can bring him to battle, he will endeavour to have a superiority of force at the point where he decides to attack. If he is successful in doing this, he will destroy a portion of the enemy's organization, upset his equilibrium, and open the way to a series of further blows, which in the end will destroy the enemy army as an effective force. Though everyone knows the principle, it is extremely difficult to apply it, mainly, of course, because the enemy does not remain at rest, but is manoeuvring or attacking himself. This leads to the next principle.

The Principle of Distribution

The General must distribute his troops so that he will be able to concentrate against the enemy wherever he meets him along his chosen line of operations, and at the same time will be able to secure himself against interference with his plan of action by the enemy.

The Principle of Determination

The General, having decided on a plan to achieve his object, has now to carry it out. The ideal is that in the execution of the operations, the army should move as an instrument directly responsive to his single will, for it is

impossible for command to be efficiently exercised by more than one man. To carry out his plan in the face of the obstacles and unexpected turns of events which will inevitably beset him, he needs enormous strength of will. Any faltering on the part of the General will filter down and result in demoralization of the men.

The Principle of Surprise

It is impossible to concentrate a superior force against a portion of the enemy army if the enemy is aware of your plans and the movement of your troops. Therefore it is essential to mislead the enemy until a situation has been reached when the enemy will find himself unable to parry the intended blow. When this happens, the opposing general will be obliged to recast his plan, and his "determination" will suffer. The principle of Surprise is effective in every sphere of war activity. "Whatever is unexpected is of great effect." (Frederick the Great).

The Principle of Endurance

Endurance in the man is as necessary as determination in the General, and is its compliment in the effective functioning of an army. Moral endurance is meant, more than physical, and this must be built up by a careful moral training; fostering the spirit of self-sacrifice and patriotism in the troops.

The Principle of Mobility

In war, nothing can be effected without movement. A general, in forming his plan, should endeavour to secure for his army freedom of movement to the greatest extent possible.

The Principle of Offensive Action

To break down the will and organization of the enemy forces, it is necessary to attack. It is obvious that the other principles of war can only be fully applied when one is on the offensive.

The Principle of Security

Offensive action is the ultimate aim of the commander, so he must distribute his troops so that the execution of his plan will be secure against the enterprises of the enemy. This implies a defensive attitude in parts of the theatre of operations. The principle of concentration demands that forces employed defensively should be as small as possible. It is in the distribution of his troops so as to maintain a correct balance between the need for concentration and the need for security that the capacity of the general is proved.

Differences between Colonel Fuller's Principles in 1915 and 1925

If the above principles are compared with those in F.S.R., it will be seen that the principle of the "Maintenance of the Objective" has been changed to those of "Direction" and "Determination"; that of "Economy of Force" has been translated to a higher sphere; the principle of "Mobility" has been made more general in terms, and, it seems to me, becomes practically a restatement, in slightly different word, of the principle of Direction. Colonel Fuller has a number of long and complicated arguments about mobility in his book, the outcome of which is that to get anywhere, it is necessary to move.

The principle of Co-operation has been scrapped. He now considers co-operation to be one of the elements which makes any organization or effort possible-without co-operation, nothing can be done. This is indeed true, but I think that it is still necessary to include the principle of Co-operation as a guide to action. Everyone knows how easy it is to overlook it when planning some action; the uninstructed soldier is apt to think of his doings as isolated episodes, not affected by or affecting others. It is only when he gets into trouble that he thinks of co-operation – i.e., help from the other fellow. I wonder if it is unfair to suggest that as co-operation would have made ten principles of war, and hence destroyed the symmetrical arrangement by threes, Colonel Fuller persuaded himself that he should relegate it to a different category? It seems to me, at any rate, that Co-operation has as much right to be included in the principles as Mobility has.

A Re-arrangement of the “Principles of War”

I have hinted above that it might be possible to rearrange the principles of war in a more logical fashion than they are given in F.S.R. or in Colonel Fuller’s book. Such a rearrangement I presume to offer below. The principles are all familiar, and have all been argued about in numerous books on war, including Colonel Fuller’s. Quotations and argument in support of the principles and arrangement have been omitted, so as to keep the length of the article within reasonable limits.

Principles of Organization for War

1. *Unity of Command.* It is impossible to divide the responsibility of command. Not more than one man can exercise command in any operation. The forces under him must be so organized that they are entirely responsive to and animated by his will.
2. *Co-operation.* An army should be considered as a machine designed for a single purpose-the defeat of the enemy. Every part of the army-every man and every weapon should work harmoniously in conjunction with all the rest for the attainment of the object. If any part does no work or only works with friction, the machine is badly designed or assembled – i.e., organization or training are faulty.
3. *Mobility.* The striking power of any force is the product of its mass (weapon power) and its velocity of movement (mobility). The more mobile a force can be made through proper organization, the greater will be its fighting value.
4. *Common Doctrine.* The commander-in-chief will not be able to foresee everything, and occasions will arise when subordinates will have to make independent decisions. In such cases it is necessary, if co-operation is to be maintained, that the decisions will adhere to a norm. That is a subordinate commander, as well as foreseeing his own course of action, should be able to estimate with confidence the action of co-operating commanders. This can be accomplished by uniformity of

training and doctrine throughout an army, which however, should not be allowed to degenerate to routine and dogma.



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Principles of the Direction of War

1. *The Object.* The commander must have clearly in his mind at the outset what the object of his operations is. The full force of his will must be concentrated on the attainment of this object throughout the fighting. The normal object in war is the destruction of the enemy's fighting forces.
2. *Concentration.* It will seldom be possible to overwhelm all portions of the opposing army at once. It is therefore necessary to destroy it piecemeal.

Superior force must be concentrated against an important part of the enemy's forces, at such a point that defeat there will compromise the safety of the mass of his forces, or of his territory.

3. *Offensive.* To effect such a concentration, it will normally be necessary to move against him, though sometimes, through mistakes of the enemy, the side which rests on the defensive at first will find an opportunity for a concentration, and the taking of the offensive.
4. *Security.* It follows that every offensive, until it can take effect at the vital point chosen as objective, must be protected against possible countermoves of the enemy. This is done through the proper distribution of the troops, which is the ultimate test of the capacity of the commander.
5. *Surprise.* The concentrated offensive can only succeed if the enemy is unaware of our intentions, otherwise he will be able to parry the blow. Hence we must mislead him, and surprise him – i.e., bring him face to face with a situation which will demand a change of plan on his part to deal with. Surprise is most often effected by rapidity of decisions and movement.



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